DEFENSE LOGISTICS AGENCY
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June 26, 2015

MEMORANDUM FOR MILITARY/INDUSTRY DISTRIBUTION

SUBJECT: Initial Drafts of:

MIL-PRF-THIN (Capacitor, Chip, Fixed, Ceramic Dielectric (Temperature Stable and General Purpose), Extended Range, High Reliability and Standard Reliability, General Specification For)
MIL-PRF-THIN/5 (Capacitor, Chip, Fixed, Ceramic Dielectric (Temperature Stable and General Purpose), Extended Range, High Reliability and Standard Reliability, Size 1206)

Project numbers: 5910-2013-026 and 5910-2015-014.

The subject documents are now available for viewing and downloading from the DLA Land and Maritime - VA website:

http://www.landandmaritime.dla.mil/Programs/MilSpec/initialdrafts.aspx

These documents are being prepared to provide requirements and quality assurance provisions for extended range, general purpose and temperature stable, surface mount, ceramic capacitors utilizing precious metal (PME) or base metal electrodes (BME). Two product levels are offered: M level (standard reliability) and T level (high reliability). T level capacitors are intended for space, missile, and other high reliability applications. MIL-PRF-THIN capacitors have higher capacitance values than MIL-PRF-123 and MIL-PRF-55681 capacitors of the same size and voltage rating.

MIL-PRF-THIN is the working name for this specification. A 5 digit number will be assigned upon final approval from DLA Document Services.

Concurrence or comments are required at this Center no later than 31 July 2015. If comments are not received during the allotted coordination period, concurrence may be assumed. Late comments may be held for the next specification action. Comments from military departments must be identified as either “Essential” or “Suggested”. Essential comments must be justified with supporting data. Military review activities should forward comments to their custodians of this office, as applicable, in sufficient time to allow for consolidating the department reply. Since Navy – EC is a custodian for this document; all Navy review activities should forward their comments directly to this Center.

The point of contact for this project is Mr. John Bonitatibus, DLA Land and Maritime - VAT, Post Office Box 3990, Columbus, OH 43218-3990. The preferred method of contact is via email. John can be reached at john.bonitatibus@dla.mil or 614-692-4709/DSN 850-4709.

//Signed//

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Chief
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NOTE: This draft, dated 25 June 2015, prepared by DLA-CC, has not been approved and is subject to modification.
DO NOT USE PRIOR TO APPROVAL. (Project 5910-2015-014)

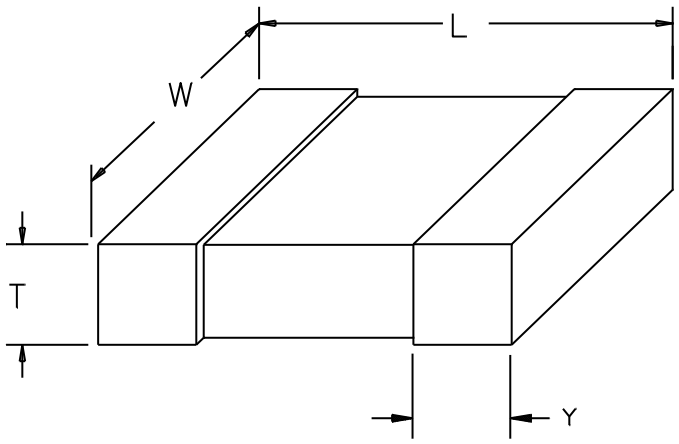
INCH-POUND
MIL-PRF-THIN/5
DRAFT

PERFORMANCE SPECIFICATION SHEET

CAPACITOR, CHIP, FIXED, CERAMIC DIELECTRIC (TEMPERATURE STABLE AND GENERAL PURPOSE), EXTENDED RANGE, HIGH RELIABILITY AND STANDARD RELIABILITY, SIZE 1206

This specification sheet is approved for use by all Departments and Agencies of the Department of Defense.

The requirements for acquiring the product described herein shall consist of this specification sheet and MIL-PRF-THIN.



Dimensions			
L ± .010	W ± .010	T Max.	Y ± .010
.126	.063	.070	.020

inches	mm
.010	0.25
.020	0.51
.063	1.60
.070	1.78
.126	3.20

NOTES:
1. Dimensions are in inches.
2. Metric equivalents are given for information only.
3. Dimensions and tolerances are for terminated chips.
4. For solder termination finishes, the positive length tolerance shall be .025 inch (0.64 mm) and the positive width and thickness tolerances shall be .015 inch (0.38 mm).

FIGURE 1. Size 1206 capacitors.

REQUIREMENTS:

Dimensions and configuration: See figure 1.

Capacitance value: See table I.

Capacitance tolerance: See table I.

Rated voltage (V_{dc}): V = 4; W = 6.3; X = 10; Y = 16; Z = 25; A = 50; B = 100; C = 200. See table I for maximum rated voltage available for each capacitance value.

Operating temperature range: -55°C to +125°C.

Termination finish: D, G, M, R, V, and Z as specified in MIL-PRF-THIN.

Electrode: P and B as specified in MIL-PRF-THIN.

Product level designator: Standard reliability – M and high reliability - T.

Marking: In accordance with MIL-PRF-THIN.

TABLE I. Size 1206 capacitor characteristics.

Part or Identifying Number (PIN) 1/	Capacitance (pF)	Capacitance tolerance	VTL/TC	Rated voltage 2/ (V_{dc})	Electrode material
-THIN05- -561 - - -	560	F, G, J, K	BP, C0G	200	P, B
-THIN05- -681 - - -	680	F, G, J, K	BP, C0G	200	P, B
-THIN05- -821 - - -	820	F, G, J, K	BP, C0G	200	P, B
-THIN05- -102 - - -	1000	F, G, J, K	BP, C0G	200	P, B
-THIN05- -122 - - -	1200	F, G, J, K	BP, C0G	200	P, B
-THIN05- -152 - - -	1500	F, G, J, K	BP, C0G	200	P, B
-THIN05- -182 - - -	1800	F, G, J, K	BP, C0G	200	P, B
-THIN05- -222 - - -	2200	F, G, J, K	BP, C0G	100	P, B
-THIN05- -272 - - -	2700	F, G, J, K	BP, C0G	100	P, B
-THIN05- -332 - - -	3300	F, G, J, K	BP, C0G	100	P, B
-THIN05- -392 - - -	3900	F, G, J, K	BP, C0G	100	P, B
-THIN05- -472 - - -	4700	F, G, J, K	BP, C0G	100	P, B
-THIN05- -562 - - -	5600	F, G, J, K	BP, C0G	100	P, B
-THIN05- -682 - - -	6800	F, G, J, K	BP, C0G	100	P, B
-THIN05- -822 - - -	8200	F, G, J, K	BP, C0G	100	P, B
-THIN05- -103 - - -	10,000	F, G, J, K	BP, C0G	100	P, B
-THIN05- -123 - - -	12,000	F, G, J, K	BP, C0G	100	P, B
-THIN05- -153 - - -	15,000	F, G, J, K	BP, C0G	100	P, B
-THIN05- -183 - - -	18,000	F, G, J, K	BP, C0G	100	P, B
-THIN05- -223 - - -	22,000	F, G, J, K	BP, C0G	25	P, B
-THIN05- -273 - - -	27,000	F, G, J, K	BP, C0G	25	P, B
-THIN051-104 - - -	100,000	K, M	X7R	100	P, B
-THIN051-154 - - -	150,000	K, M	X7R	100	P, B
-THIN051-184 - - -	180,000	K, M	X7R	100	P, B
-THIN051-224 - - -	220,000	K, M	X7R	100	P, B
-THIN051-274 - - -	270,000	K, M	X7R	100	P, B

See footnotes at end of table.

TABLE I. Size 1206 capacitor characteristics - Continued.

Part or Identifying Number (PIN) 1/	Capacitance (pF)	Capacitance tolerance	VTL/TC	Rated voltage 2/ (V_{dc})	Electrode material
-THIN051-334 - - -	330,000	K, M	X7R	100	P, B
-THIN051-394 - - -	390,000	K, M	X7R	100	P, B
-THIN051-474 - - -	470,000	K, M	X7R	50	P, B
-THIN051-564 - - -	560,000	K, M	X7R	50	P, B
-THIN051-684 - - -	680,000	K, M	X7R	50	P, B
-THIN051-824 - - -	820,000	K, M	X7R	50	P, B
-THIN051-105 - - -	1,000,000	K, M	X7R	50	P, B
-THIN051-125 - - -	1,200,000	K, M	X7R	25	P, B
-THIN051-155 - - -	1,500,000	K, M	X7R	25	P, B
-THIN051-185 - - -	1,800,000	K, M	X7R	25	P, B
-THIN051-225 - - -	2,200,000	K, M	X7R	25	P, B
-THIN051-335 - - -	3,300,000	K, M	X7R	16	P, B

1/ The complete PIN shall include additional symbols to indicate product level, VTL/TC (where applicable), voltage, capacitance tolerance, termination finish, and electrode material.
2/ This is the maximum rated voltage available. All lower voltage ratings are also available.

Custodians:
Army – CR
Navy - EC
Air Force – 85
DLA - CC

Preparing activity:
DLA - CC

(Project 5910-2015-014)

Review activities:
Army - MI
Navy - AS, MC, OS, SH
Air Force - 19, 99
Other – MDA, NA

NOTE: The activities listed above were interested in this document as of the date of this document. Since organizations and responsibilities can change, you should verify the currency of the information above using ASSIST Online database at https://assist.dla.mil.